

Polar Energy™

Analizzatore di Energia da quadro 96x96, ideale per la misura e il monitoraggio delle reti elettriche in bassa e media tensione.

Energy Analyzer from 96x96 frame, ideal for measuring, monitoring of electrical networks in low and medium voltage.



Polar Energy (successore dell'analizzatore di energia Elcontrol **VIP396**) è uno strumento multifunzionale da pannello (96x96mm.), ideale per la misura, la visualizzazione e monitoraggio remoto delle grandezze elettriche.

Può essere utilizzato su reti **monofase, bifase, trifase** in bassa e media tensione. Le funzionalità evolute lo rendono uno strumento adatto alle esigenze più gravose.

EN **Polar Energy** (successor to the Elcontrol **VIP396** energy analyzer) is a multifunctional panel instrument (96x96mm), ideal for measurement, display and remote monitoring of electrical parameters.

It can be used on **single-phase, two-phase, three-phase** low and medium voltage networks. Its advanced features make it a tool suitable for the most demanding needs.

POTENTE E FLESSIBILE

- ✓ Ridotti ingombri in profondità nel pannello
- ✓ Frontale IP65
- ✓ Alimentazione switching 90/230 Vac e 90/300 Vdc (+ opzione 24-48 Vdc)
- ✓ Analisi dei parametri di qualità dell'energia
- ✓ Scalabile grazie alle opzioni plug & play da inserire posteriormente
- ✓ 3 canali di misurazione della tensione fino a 600V CAT III con la precisione dello 0,25%
- ✓ 4 distinti ingressi di corrente (3 + 1 per la corrente di neutro), con la precisione dello 0,25%, con 4 TA interni per un migliore isolamento elettrico;
- ✓ 6 diversi sistemi elettrici analizzabili (monofase; bifase; trifase a 3 fili sbilanciato; trifase a 4 fili sbilanciato; trifase a 3 fili equilibrato; trifase a 4 fili equilibrato)
- ✓ Utilizzabile in reti con frequenze 40-70Hz e 400Hz
- ✓ Multilingua
- ✓ Display customizzabile, scegliendo quali grandezze visualizzare a rotazione nella parte inferiore e ruotandolo di 90° in funzione della comodità di lettura

MEASUREMENT PRECISION, EASINESS OF USE

- ✓ Reduced dimensions in depth inside the panel
- ✓ IP65 front panel
- ✓ Switching power supply 90/230 and 90/300 Vac Vdc (+ 24-48 Vdc option)
- ✓ Scalable thanks to the plug & play options to insert posteriorly
- ✓ 3 measuring channels of voltage up to 600V CAT III with the precision of 0.5%
- ✓ 4 distinct current inputs, with 0.5% accuracy
- ✓ 6 different electrical systems analyzed (single-phase, two-phase, three-phase 3-wire unbalanced, three-phase 4-wire unbalanced, balanced three-phase 3-wire, three-phase 4-wire balanced)
- ✓ It can be applied on systems with 40 – 70 Hz and 400Hz frequency
- ✓ Multilingual
- ✓ Customizable display, choosing which values display in rotation in the lower part and rotating it 90° in relation to the comfort of reading

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ENCLOSURE:

Sizes	96x96x58 mm 96x96x96 mm (with option modules)
Overall dimensions inside the board	96x105x40 mm 96x105x77 mm (with option modules)
Material	ABS with V0 self-extinguish rating
Protection rating	IP65 (at the front), IP30 (at the back)
Weight	320 g + 35 g for each option

DISPLAY:

Type	LCD dot matrix (graphic type) 128x128 FSTN negative
Backlight	White LED
Languages	English, Spanish, Italian, German, French

KEYPAD:

Type	4 keys
Material	Silicone

CONNECTIONS:

Supply and voltages	Removable terminals with retaining screws
Currents	Removable terminals with retaining screws

POWER SUPPLY:

AC	90-230V ±10% 50 - 60 Hz 8VA
DC	90-300V ±10% 8W
DC (with dedicated option)	12-24V ±10%
DC (with dedicated option)	48-60V ±10%
Consumption	5VA
Wire section	2.5mm ²

MEASURES:

Refresh interval of video data	1 sec.
Type of possible connection	Three-phase (with 3 or 4 leads), two-phase (with 2 leads) and single-phase network
Type of network that can be connected	Low and Mean Voltage (LV)

VOLTAGE (TRMS)

Available frequencies	From 40 Hz to 70 Hz and 400 Hz
Channels	3 channels with common neutral
Input impedance	4 Mohm
Direct measure	Phase-phase: 17-700VAC 40-70Hz, 400Hz Phase-neutral: 10-400VAC 40-70Hz, 400Hz
Measure through VT	Ratio: 1-60000 Max. value displayed: 20 MV
Permanent overload	800VAC
Sensitivity	10V Phase-neutral, 17 Phase-phase
Wire section	2.5mm ²

CURRENT (TRMS)

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Channels	4 independent channels with shunt
Input consumption	<1VA
Scales	2
Direct measure	N/A
Maximum measurable current	8A
Measure through CT	Ratio: 1-60000 Max. value displayed: 500KA
Permanent overload	10A
Intermittent overload	50A 1 sec
Sensitivity	10mA
Wire section	2.5mm ²
POWERS	
Single phase power	Values < 999 GW, Gvar, GVA
Total powers	Values < 999 GW, Gvar, GVA
ENERGY COUNTERS	
Max. value before reset	99999999 kWh, kvarh, kVAh
ACCURACY	
Voltages	±0.25% + 0.05%FS
Currents	±0.25% + 0.05%FS
Powers	±0.5% + 0.05%FS
Power Factor (PF)	±0.5° (from 40 Hz up to 50 Hz)
Frequency	±0.01 Hz (40 - 70Hz, 400 Hz)
Active energy count (kW)	Class 0.5
Reactive energy count (kVar)	Class 1
CONDITIONS OF USE:	
Operating temperature	from -10 to +55 °C
Storage temperature	from -20 to +85 °C
Relative humidity	Max 95%
Maximum operation altitude (a.s.l.)	2,000 m
EC COMPLIANCE:	
Directives	93/68/EEC (LV electrical equipment); 89/336/EEC and 2004/108/EC (EMC - Electromagnetic Compatibility) 2006/95/EC - 72/23/EEC (LVD - Low Voltage Directive); 2002/95/EC (RoHS - Restriction of Hazardous Substances); 2002/96/EC and 2003/108/EC (WEEE: Waste Electrical and Electronic Equipment)
REFERENCE STANDARDS:	
Safety	EN 61010-1
Electromagnetic Compatibility (EMC)	EN 61326 EN 61326/A1 EN 61326/A2 EN 61326/A3

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Mechanical dimensions	IEC 61554 (ex DIN 43700)
Temperature	IEC 60068-2-1 (operating temperature)
	IEC 60068-2-2 (storage temperature)
Vibrations	IEC 60068-2-6
Humidity	IEC 60068-2-30 (humidity)
Overload	IEC 60947-1
